

REMARKS

Claim 13 is canceled without prejudice or disclaimer. Claim 1 is amended. Claim 14 is added. Support for amended claim 1 appears throughout the specification as filed, e.g., p. 6 lines 6-8. Support for added claim 14 appears throughout the specification as filed, e.g., p. 4, lines 17-18.

It is respectfully submitted that the present amendment presents no new issues or new matter and places this case in condition for allowance. Reconsideration of the application in view of the above amendments and the following remarks is requested.

I. The Rejection of Claim 13 under 35 U.S.C. 101

Claim 13 stands rejected under 35 U.S.C. 101 as directed to non-statutory subject matter. Claim 13 has been canceled, thereby obviating the rejection.

II. The Rejection of Claims 1-12 under 35 U.S.C. 102(b)

Claims 1-12 stand rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Picon et al., *Biotechnology Letters* 19(4) pp. 345-348 (1997) (hereinafter "Picon"). The Examiner states that Picon teaches a process for producing cheese (e.g., Manchego) comprising adding phospholipase C in the claimed amounts to a conventional cheese making process. This rejection is respectfully traversed.

The amended claims provide processes for increasing cheese yield comprising adding to cheese milk, or a fraction of cheese milk, a phospholipase selected from the group consisting of phospholipase C, phospholipase D, and combinations thereof; and producing cheese from the cheese milk.

In contrast, Picon discloses the addition of encapsulated proteinase and phospholipase C to ewe's milk in a method for manufacturing Manchego cheese. Picon, Abstract. The proteinases are added to shorten the maturation period of the cheese. *Id.*, p. 345, column 1, paragraph 1. Picon explains that proteinase can advantageously be encapsulated in liposomes before being added to the cheese to minimize the loss of protein in whey caused by early protein degradation. *Id.* But the enzymatic activity of some proteinases may be hindered by the short period of time elapsing since they are released from the liposomes until cheese pH and temperature fall to values at which the proteolytic activity is considerably reduced. *Id.* To accelerate release of the proteinase from the liposomes, stimulated release liposomes were developed by co-encapsulating the proteinase with a phospholipase. *Id.*, column 1, paragraph 2. This resulted in enhanced

casein degradation in the milk. *Id.* The skilled person would know that enhanced casein degradation in the milk results in increased loss of milk protein in the whey and therefore reduced cheese yield. For example, the authors of Picon in a previous publication (Picon et al., *Biotechnology Letters* 17(10) pp. 1051-1056 (1995) (hereinafter “Picon2”)) have compared casein degradation in milk when incubated with proteinase encapsulated with or without phospholipase C. Picon2, p. 1051, Summary and p. 1052, Preparation of liposomes. Table 2 of Picon2 shows a higher casein degradation with triggered liposomes, i.e. liposomes with phospholipase, as opposed to conventional liposomes made in the same way but without phospholipase. Thus, the addition of phospholipase to the cheese milk in the method of Picon will result in higher casein degradation and therefore reduced cheese yield.

Accordingly, Picon does not teach or suggest a process for increasing cheese yield comprising adding to cheese milk, or a fraction of cheese milk, a phospholipase C or D or a combination thereof. Applicants therefore respectfully submit that the amended claims are novel.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 102. Applicants respectfully request reconsideration and withdrawal of the rejection.

III. Other Citation

Applicants acknowledge the Examiner’s citation of WO 00/54601 as being of interest to the claimed invention.

IV. Conclusion

In view of the above, it is respectfully submitted that all claims are in condition for allowance. Early action to that end is respectfully requested. The Examiner is hereby invited to contact the undersigned by telephone if there are any questions concerning this amendment or application.

Please charge all required fees to Novozymes North America, Inc.'s Deposit Account No. 50-1701 at the time of electronic filing. The USPTO is authorized to charge this Deposit Account should any additional fees be due.

Respectfully submitted,

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